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 **istec**



IBERO AMERICAN SCIENCE & TECHNOLOGY
EDUCATION CONSORTIUM



New Challenges in a Global Collaborative Environment

Definition and scope



The *Ibero-American Science and Technology Education Consortium (ISTEC)* is a non-profit organization comprised of educational, research, industrial, and multilateral organizations throughout the Americas and the Iberian Peninsula. The Consortium was established to foster scientific, engineering, and technology education, joint international research and development efforts among its members, and to provide a cost-effective vehicle for the application and transfer of technology.



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History



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- June 1990, University of New Mexico
- Personnel from UNM visited countries in Ibero-America to identify and evaluate opportunities for successful collaboration in science, innovation, technology, education and entrepreneurship.
- December 1990, organizational meeting was held at UNM involving participants from universities, industries, governments, and foundations throughout Ibero-America.



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Obstacles to improve

- Lack of current information for planning and developing technology
- Lack of expertise in the use of information
- Lack of international cooperation in developing the critical mass needed for projects and joint efforts
- Lack of interaction and confidence among universities, industries, governments, and multilateral agencies
- Lack of availability of technology
- Lack of entrepreneurship to bring technology and intellectual property to the marketplace



History



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Result of the meeting

- Creation of ISTEAC (Ibero-American Science and Technology Consortium)

Members

- Universities, industries and other organizations

1990 MOU (Memorandum of Understanding)

1999 officially became a US 501 non-profit organization

History



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Organization

- General assembly
- Board of directors
- Executive office



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History



Objectives

- to conceive, plan, and carry out activities of higher education, R&D, and technology transfer for the purpose of facilitating scientific and technical development of the Ibero-American countries;
- to encourage the free flow of and access to information in the pursuit of technical excellence.



An innovative concept
the initiatives



Initiatives



What are the **Initiatives**?

- An organized effort to create activities to address a specific area of concern.
- The Initiatives are **member-driven**, flexible, and run concurrently.
- Within Initiatives, projects are identified, planned, and implemented.
- Projects are designed with both short- and long-term goals, and with consideration of social impact.

Initiatives



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Library Linkages

- Modernize document delivery to complement education, research, manufacturing and policy design.
- Broaden electronic availability of research materials, to upgrade the information skills of library staff and to sharpen the skill and independence of the electronic user.
- To manage all requests about bibliographic resources required by users the Celsius Software environment was developed at the Universidad Nacional de La Plata, Argentina.

LibLink
Library Linkages

Initiatives



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Library Linkages

A new generation of that environment, Celsius Network, permits interconnection among all instances of Celsius, installed at this moment in servers over 64 institutions distributed in 12 countries of America.



This platform is offered free of charge to all ISTEAC institutions at celsius.prebi.unlp.edu.ar

This Initiative encourages the creation of networks (local, national, regional, global) of institutional open access repositories of knowledge and data.



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Advanced Continuing Education

- Upgrade the available skills and increase the number of qualified individuals in applicable areas.
- Adaptation, design and enhancement of curricula, professional development, accreditation, on-site training and web-based distance learning.
- The initiative employs the most current technology to develop superior systems for the educational process.
- Also utilizes non-traditional faculty, staff, and student exchanges, including graduate interuniversity degrees.



Research & Development Laboratories

- Provide a vehicle for performing research and development in a variety of disciplines.
- Laboratory facilities are utilized in teaching situations to enhance interaction between industries and universities in order to foster innovation, creativity and collaboration.
- The initiative improves the ability for the latest technology to be applied to the resolution of problems in a variety of areas and encourages the development of solutions that have regional and local social and economic impact.



Los Libertadores

- Create a flexible network of electronic services (e-services) for education, information exchange, R&D, as well as to provide ICTs for social, cultural, political and economic development.
- Share worldwide expertise, facilitate distributed problem solving and create the critical mass needed for the improvement of regional projects.
- Foster technology transfer and the encouragement of social and business entrepreneurs through the implementation of “Centers of Excellence”.



Concerns & Challenges



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Permanent Goals

- to work with ISTEAC members to guarantee sustainable socio-economic development in Ibero-America in a global context.
- to spur an international strategy for generating and supporting collaborative activities among academia, industry, government, which are aligned with local, national, regional and global challenges.



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Concerns & Challenges



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And now...

ISTEC wants to align itself with international efforts being carried out by and with other organizations that are concerned with STEM education, R&D and entrepreneurship.



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Concerns & Challenges



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New programs to address new challenges

- **Science and Technology Entrepreneurships for Economic Development (STEED)**
- **ISTEC-Salud**
- **GRANA-ISTEC**



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Concerns & Challenges



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Science and Technology Entrepreneurships for Economic Development (STEED)

Program to combine the science and technology potential of the membership with the technology commercialization expertise found in the US, Europe, Asia in order to create partnerships with universities, governmental organizations, research parks, and companies.



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Concerns & Challenges



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ISTEC-Salud

Cooperative effort to share experiences in medicine, biology, engineering and other areas. Also, facilitate a new, interdisciplinary study called Neuro-systems Engineering which integrates medicine, engineering and computational sciences.



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Concerns & Challenges



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GRANA-ISTEC

Real-time, online self-evaluation tool for educational programs, using international standards and leading to a Certificate of Quality.

Objective: to aid academic institutions in their process of accreditation/certification of undergraduate, graduate, and e-learning educational programs that have as a goal meeting the challenges of developing Global Engineers, and in particular the Engineer for the Americas.



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Vision & Mission



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ISTEC Vision

ISTEC will be a leading force in fostering socio-economic and educational change in Ibero-America, by creating prosperity and improving quality of life in the region.



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Vision & Mission



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ISTEC Mission

Foster sustainable socio-economic development in Ibero-America by carrying out programs focused on:

- Advancing the state of higher education in Science, Technology, Engineering and Math (STEM)
- Generating and disseminating knowledge and information
- Establishing cost-effective vehicles for technology transfer



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Vision & Mission



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ISTEC Mission

- Encouraging joint international research and development
- Fostering an environment for entrepreneurship and collaboration
- Promoting leadership models that adhere to the principles of responsibility and accountability.



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Conclusion



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Over **28 countries** ISTE has strategic alliances among academia, industry, government agencies, and multilateral organizations, and promotes the culture of quality, generating and disseminating knowledge and information, establishing cost-effective vehicles for technology transfer, encouraging joint international research and development, and creating an environment for entrepreneurship.

The ISTE Model will help in bridging the Digital Divide that afflicts all nations. This Digital Divide can be transformed into Digital Opportunities with Information Technology (DD... to... DO IT!).

Authors



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**Thanks!
Gracias!**